

REMARKS

In the Office Action dated June 4, 2003, the Examiner raised objection to the specification and claims and also identified a number of antecedent basis issues in the claims. Applicant has amended the specification and claims to address the issues pointed to by the Examiner, and it is respectfully submitted that these objections and rejections are now moot.

With respect to the rejection of the claims under 35 USC §102, the claims have been amended to more clearly distinguish the present invention from the cited prior art. More specifically, claims 1 and 21 have been amended to recite that illumination radiation with an energy density substantially in the range from 2 to 20 Jcm⁻² is used to illuminate collagen containing structures. Nowhere does the cited prior art references teach or suggest these features.

US 2001/0013349 to Clement et al. (hereinafter "Clement") discloses a method and apparatus for wrinkle removal from the skin surface. The claims of the present invention are directed to the illuminating collagen containing structures such as bone, dentin, cartilage, uterus, large veins and arteries. There is no hint or suggestion in Clement that the method and apparatus disclosed therein could be used for illuminating any of the above-mentioned collagen containing structures. Moreover, the use of low energy density illumination radiation as recited in the claims advantageously provides

stimulation of collagen regrowth, which is neither taught nor suggested by the method and apparatus of Clement. For these reasons, it is respectfully submitted that the claims of the present invention are patentable over Clement.

U.S. Patent 6,156,028 to Prescott et al. (hereinafter "Prescott") discloses a method and apparatus for applying radiation to various ulcers and wounds. Nowhere does it teach or suggest the illuminating radiation delivered to the target structure is substantially in the range from 2 to 20 Jcm⁻² as recited in the claims of the present invention. For these reasons, it is respectfully submitted that the claims of the present invention are patentable over Prescott.

U.S. Patent 5,964,749 to Eckhouse et al. (hereinafter "Eckhouse") discloses a method for removing wrinkles whereby the illuminating radiation is delivered at a high density which is preferably 100 Jcm⁻². The claims of the present invention are directed to the illuminating collagen containing structures such as bone, dentin, cartilage, uterus, large veins and arteries. There is no hint or suggestion in Eckhouse that the method and apparatus disclosed therein could be used for illuminating any of the above-mentioned collagen containing structures. Moreover, the use of illumination radiation with an energy density in the range from 2 to 20 Jcm⁻² as recited in the claims is neither taught nor suggested by Eckhouse. As set forth above, these illumination parameters advantageously provide stimulation of collagen regrowth which is neither taught nor suggested by the method and apparatus of Eckhouse. For these reasons, it is respectfully submitted that the claims of the present invention are patentable over Eckhouse.

WO 98/24512 to Jones et al. (hereinafter "Jones") discloses delivery of illumination radiation at a high energy density to cause thermal injury to the dermal region of the skin leading to denaturing of collagen fibers to cause cross links. Thermal injury of the epidermis is prevented by delivering the radiation in a sequence of a grid-like pattern on the skin surface. Each given square of the grid surface receives a short pulse of radiation and the neighboring spot receives pulses of radiation only after the thermal dissipation time of the given grid square. There is no hint or suggestion in Jones that the method and apparatus disclosed therein could be used for illuminating any of the above-mentioned collagen containing structures. Moreover, the use of illumination radiation with an energy density in the range from 2 to 20 Jcm⁻² as recited in the claims is neither taught nor suggested by Jones. As set forth above, these illumination parameters advantageously provide stimulation of collagen regrowth which is not taught or suggested by the method and apparatus of Jones. For these reasons, it is respectfully submitted that the claims of the present invention are patentable over Jones.

In light of all of the above, it is submitted that the claims are in order for allowance, and prompt allowance is earnestly requested. Should any issues remain

outstanding, the Examiner is invited to call the undersigned attorney of record so that the case may proceed expeditiously to allowance.

Respectfully submitted,



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